

SEQUENCE LISTING

<110> Gutteridge, Steve
Harvell, Leslie T.
Orozco, Buddy

<120> Plant Genes Encoding Pantothenate Synthetase

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<151> 2000-11-13

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<213> Zea mays

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<212> PRT

<213> Zea mays

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 50 55 60
 Val Val Ser Ile Tyr Val Asn Pro Ser Gln Phe Ala Pro Thr Glu Asp
 65 70 75 80
 Leu Ala Thr Tyr Pro Ser Asp Phe Ala Gly Asp Leu Arg Lys Leu Ala
 85 90 95
 Ala Thr Gly Val Val Ala Ala Val Phe Cys Pro Pro Asp Leu Tyr Val
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 Arg Gly Ser Ala Asp Arg Pro Ser Ala Ala Gly Ala Ser Gly Gly Ala
 115 120 125
 Val Ser Cys Leu Glu Asp Ala Gly Gly His Ala His Glu Thr Trp Ile
 130 135 140
 Arg Val Glu Arg Leu Glu Lys Gly Leu Cys Gly Ser Ser Arg Pro Val
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 Phe Phe Arg Gly Val Ala Thr Val Val Ala Lys Leu Phe Asn Ile Val
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 Glu Pro Asp Val Ala Val Phe Gly Lys Lys Asp Tyr Gln Gln Trp Arg
 180 185 190
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 225 230 235 240
 Arg Ser Leu Val Asp Ala Arg Thr Ala Ala Leu Ser Gly Ser Asn Arg
 245 250 255
 Ser Gln Glu Ile Lys Asp Gln Ile Val Arg Thr Ile Thr Glu Ala Gly
 260 265 270
 Gly Gln Val Asp Tyr Val Glu Ile Val Gly Gln Glu Ser Leu Val Pro
 275 280 285
 Val Glu Arg Met Asp Arg Pro Cys Val Ile Cys Val Ala Ala Trp Phe
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 Ser Ile Tyr Val Asn Pro Ser Gln Phe Ala Pro Thr Glu Asp Leu Ala
 65 70 75 80

Thr Tyr Pro Ser Asp Phe Ala Gly Asp Leu Gly Lys Leu Ala Ala Thr
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 Ser Ala Asp Arg Pro Ser Ala Ala Ser Ala Ser Gly Gly Ala Val Ser
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 225 230 235 240
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 245 250 255
 Glu Ile Lys Asp Gln Ile Val Arg Thr Ile Thr Glu Ala Gly Gly Gln
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 Val Asp Tyr Val Glu Ile Val Glu Gln Glu Ser Leu Val Pro Val Glu
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 <211> 1644
 <212> DNA
 <213> Eucalyptus grandis

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<211> 1183

<212> DNA

<213> Eucalyptus grandis

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<212> PRT

<213> Eucalyptus grandis

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 <212> PRT
 <213> Glycine max

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 35 40 45
 Arg Gln Leu Ser Asp Val Val Ala Val Ser Ile Tyr Val Asn Pro Gly
 50 55 60
 Gln Phe Ala Pro Thr Glu Asp Leu Ser Thr Tyr Pro Ser Asp Phe Asp
 65 70 75 80
 Gly Asp Val Lys Lys Leu Ala Ser Val Pro Gly Gly Val Asp Val Val
 85 90 95
 Phe His Pro Arg Asn Leu Tyr Asp Tyr Gly Lys Asn Gly Gly Gly Asp
 100 105 110

Val Ala Glu Ala Gly Gly Met Val Ser Cys Val Glu Ser Gly Ser Gly
115 120 125

His Glu Ser Trp Val Arg Val Glu Lys Leu Glu Leu Gly Leu Cys Gly
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Lys Ser Arg Pro Val Phe Phe Arg Gly Val Ala Thr Val Val Thr Lys
145 150 155 160

Leu Phe Asn Ile Val Glu Pro Asp Val Ala Val Phe Gly Lys Lys Asp
165 170 175

Tyr Gln Gln Trp Arg Leu Ile Gln Arg Met Val Arg Asp Leu Asp Phe
180 185 190

Ser Ile Lys Val Ile Gly Ala Glu Ile Thr Arg Asp Asn Asp Gly Leu
195 200 205

Ala Met Ser Ser Arg Asn Val His Leu Ser Pro Glu Glu Arg Glu Lys
210 215 220

Ala Leu Ser Ile Asn Lys Ser Leu Leu Arg Ala Lys Ser Ala Ala Gly
225 230 235 240

Asp Gly Gln Val His Cys Glu Lys Leu Thr Asn Leu Val Ile Gln Ser
245 250 255

Val Thr Asp Ala Gly Gly Arg Ile Asp Tyr Ala Glu Ile Val Asp Gln
260 265 270

Asn Asn Leu Glu Lys Val Glu Gln Ile Lys Ser Pro Val Val Phe Cys
275 280 285

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<212> DNA
<213> Tulipa fosteriana

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<213> Tulipa fosteriana

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His His Arg Arg Leu Ser His Thr Ile Ala Leu Val Pro Thr Met Gly
      35             40            45

Ser Leu His Ala Gly His Leu Ser Leu Ile Ser His Ala Ala Ser Leu
      50             55            60

Ala Asp Leu Thr Val Val Ser Ile Tyr Leu Asn Pro Thr Gln Phe Ala
      65             70            75            80

Pro Ser Glu Asp Leu Ala Thr Tyr Pro Ala Asp Leu Ala Ala Asp Leu
      85             90            95

Arg Asn Leu Arg Ala Cys Pro Ser Val Ala Ala Val Phe Cys Pro Thr
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Asn Pro Tyr Ala Asp Gly His Glu Thr Trp Val Arg Val Glu Glu Leu
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Glu Arg Gly Leu Cys Gly Leu Ser Arg Pro Val Phe Phe Arg Gly Val
      130            135            140

Ala Thr Val Val Ser Lys Leu Phe His Leu Val Glu Pro Asp Val Ala
      145            150            155            160

Val Phe Gly Lys Lys Asp Phe Gln Gln Trp Arg Val Ile Glu Lys Met
      165            170            175

Val Arg Asp Leu Asp Phe Pro Val Arg Ile Val Gly Ser Glu Ile Val
      180            185            190

Arg Glu Val Asp Gly Leu Ala Met Ser Ser Arg Asn Val Arg Leu Thr
      195            200            205

Pro Glu Glu Arg Glu Lys Ala Leu Ser Ile Ser Arg Ser Leu Ser Arg
      210            215            220

Ala Lys Val Ala Ala Gln Asn Gly Ser Ser Ser Cys Gln Glu Leu Lys
      225            230            235            240

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Asp Ile Ala Thr Gln Ser Ile Thr Glu Ala Gly Gly Arg Ile Asp Tyr
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Val Glu Ile Val Asp Gln Glu Ser Leu Lys Val Val Leu Asp Ile Thr
260 265 270

Ser Pro Val Val Met Cys Ile Ala Ala Trp Phe Gly Asn Val Arg Leu
275 280 285

Ile Asp Asn Met Glu Ile Thr Ile
290 295

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<212> DNA
<213> Triticum aestivum

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<213> Triticum aestivum

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Val Pro Thr Met Gly Phe Leu His Glu Gly His Leu Ser Leu Val Ser
35 40 45

Ala Ala Ala Ala Val Pro Gly Pro Val Ala Val Val Val Ser Ile Tyr
50 55 60

Val Asn Pro Ser Gln Phe Ala Pro Thr Glu Asp Leu Ala Thr Tyr Pro
 65 70 75 80
 Ser Asp Leu Ala Gly Asp Leu Arg Lys Leu Ala Ser Thr Gly Ala Val
 85 90 95
 His Ala Val Phe Asn Pro Pro Asp Leu Tyr His Arg Gly Ala Ala Val
 100 105 110
 Ser Gly Arg Arg Ala Glu Ala Pro Ala Gly Ala Ala Ser Ser Cys
 115 120 125
 Leu Glu Ala Gly Gly Asp Gly His Glu Thr Trp Ile Arg Val Glu Arg
 130 135 140
 Leu Glu Lys Gly Leu Cys Gly Ala Ser Arg Pro Val Phe Phe Arg Gly
 145 150 155 160
 Val Ala Thr Val Val Ala Lys Leu Phe Asn Val Val Glu Pro Asp Val
 165 170 175
 Ala Met Phe Gly Lys Lys Asp Tyr Gln Gln Trp Arg Leu Ile Cys Arg
 180 185 190
 Met Val Arg Asp Leu Asp Phe Ala Val Glu Ile Ile Gly Ala Glu Ile
 195 200 205
 Val Arg Glu Ala Asp Gly Leu Ala Met Ser Ser Arg Asn Val His Leu
 210 215 220
 Ser Pro Glu Glu Arg Glu Lys Ala Leu Ser Ile Ser Arg Ser Leu Leu
 225 230 235 240
 Asn Ala Arg Thr Ala Ala Leu Asn Asn Ser Asn Ser Ala Ser Glu His
 245 250 255
 Ile Lys Asp Gln Ile Val Gln Thr Leu Thr Glu Ala Gly Gly Arg Val
 260 265 270
 Asp Tyr Val Glu Ile Val Glu Gln Glu Ser Leu Val Pro Val Glu Thr
 275 280 285
 Ile Asp Arg Pro Val Val Ile Cys Val Ala Ala Trp Phe Gly Lys Val
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 Arg Leu Ile Asp Asn Ile Glu Ile His Ile Gln Ser
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<210> 14

<211> 313

<212> PRT

<213> Oryza sativa

<400> 14

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Arg Ala Trp Ser Arg Arg Arg Arg Ala Glu Gly Lys Thr Val Ala Val
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Val Pro Thr Met Gly Tyr Leu His Gln Gly His Leu Ser Leu Ile Ser
35 40 45

Ala Ala Ala Ala Ala Ala Ser Ala Asp Pro Val Ala Ile Val Val Thr
50 55 60

Ile Tyr Val Asn Pro Ser Gln Phe Ala Pro Ser Glu Asp Leu Ala Thr
65 70 75 80

Tyr Pro Ser Asp Phe Ala Gly Asp Leu Arg Lys Leu Ala Ser Thr Gly
85 90 95

Val Val Asp Ala Val Phe Asn Pro Pro Asp Leu Tyr Val Arg Gly Ala
100 105 110

Gly Arg Arg Gly Ala Gly Ser Gly Gly Ala Ile Ser Cys Leu Glu Glu
115 120 125

Ala Ala Gly Asp Gly His Glu Thr Trp Val Arg Val Glu Arg Leu Glu
130 135 140

Lys Gly Leu Cys Gly Ala Ser Arg Pro Val Phe Phe Arg Gly Val Ala
145 150 155 160

Thr Ile Val Ser Lys Leu Phe Asn Ile Ile Glu Pro Asp Val Pro Val
165 170 175

Phe Gly Lys Lys Asp Tyr Gln Gln Trp Arg Val Ile Leu Pro Tyr Trp
180 185 190

Ser Gly Leu Asp Phe Gly Ile Glu Ile Met Gly Ser Arg Asn Cys Ala
195 200 205

Arg Thr Asp Gly Leu Ala Met Asn Ser Arg Asn Val His Leu Ser Arg
210 215 220

Glu Glu Gly Lys Lys Ala Leu Ser Ile Ser Arg Ser Leu Val Asp Ala
225 230 235 240

Arg Thr Gly Ala Leu Lys Gly Asn Thr Asp Ser Lys Gln Ile Lys Asn
245 250 255

Lys Ile Val Gln Thr Leu Thr Glu Thr Gly Gly Gln Val Asp Tyr Val
260 265 270

Glu Ile Val Glu Gln Glu Ser Leu Val Pro Val Glu Gln Ile Asp Gly
275 280 285

Pro Val Val Ile Cys Val Ala Ala Trp Phe Gly Lys Val Arg Leu Ile
290 295 300

Asp Asn Ile Glu Ile Asp Thr Arg Ser
305 310

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<400> 15

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20 25 30

Gly Phe Leu His Glu Gly His Leu Ser Leu Val Arg Asp Ala His Asn
35 40 45

His Ala Asp Leu Val Ala Val Ser Ile Tyr Val Asn Pro Gly Gln Phe
50 55 60

Ser Pro Thr Glu Asp Leu Ser Ala Tyr Pro Ser Asp Phe Gln Gly Asp
65 70 75 80

Leu Gln Lys Leu Met Ser Val Pro Gly Gly Val Asp Val Val Phe His
85 90 95

Pro His Asn Leu Tyr Asp Tyr Gly Gly Asp Gly Gly Asp Ala Val Ala
100 105 110

Glu Cys Gly Gly Asp Gly Val Val Ser Cys Val Asp Arg Arg Ser Gly
115 120 125

Phe Gly His Glu Thr Trp Val Arg Ala Glu Lys Leu Glu Lys Pro Leu
130 135 140

Cys Gly Lys Ser Arg Pro Val Phe Phe Arg Gly Val Ala Thr Ile Val
145 150 155 160

Thr Lys Leu Phe Asn Ile Val Glu Pro Asp Val Ala Val Phe Gly Lys
165 170 175

Lys Asp Tyr Gln Gln Trp Lys Ile Ile Gln Arg Met Val Arg Asp Leu
180 185 190

Asp Phe Ser Ile Lys Val Ile Gly Ser Glu Val Ile Arg Glu Lys Asp
195 200 205

Gly Leu Ala Met Ser Ser Arg Asn Val Tyr Leu Ser Pro Glu Glu Arg
210 215 220

Glu Lys Ala Val Ser Ile Asn Lys Ser Leu Phe Arg Ala Lys Ser Ala
225 230 235 240

Ala Glu Asp Gly Gln Ile His Cys Glu Lys Leu Ile Asn Leu Val Val
245 250 255

Gln Ser Ile Thr Glu Ala Gly Gly Arg Ile Asp Tyr Ala Glu Ile Val
260 265 270

Asp Gln Asn Asn Leu Glu Lys Val Glu Trp Ile Lys Gly Pro Val Val
275 280 285

Phe Cys Val Ser Ala Trp Phe Gly Lys Ala Arg Leu Ile Asp Asn Ile
290 295 300

Variable	Mean	SD	Min	Max
Age	38.5	10.5	25	55
Gender	0.5	0.5	0	1
Marital status	0.7	0.5	0	1
Education	12.5	1.5	10	15
Income	3500	1500	1000	6000
Health status	0.8	0.4	0	1
Exercise frequency	2.5	1.5	0	5
Stress level	4.5	1.5	1	7
Sleep quality	3.5	1.5	1	6
Work satisfaction	4.0	1.5	1	6
Life satisfaction	5.0	1.5	1	7
Overall well-being	4.5	1.5	1	7